

Local Perspective: We Energies Role In DG Interconnection and Testing

Dave Schigoda

May 6, 2003

we energies



Distributed Generation Types

2

- Primary Power - Supplies the majority of the customer's electricity needs
- Peak Shaving - Used to reduce customers electrical demand charges
- Stand Alone Power - Isolated from the grid
- Combined Heat and Power - Provides electricity and heat to customer
- Back-up Power, or Emergency, or Stand-by Power - for blackouts, "break-before-make" transfer switch



DG Units Installed

3

- 30 kW Microturbine at Burleigh Elementary School, Brookfield, WI
- 70 kW Microturbine at Industrial Facility, Neenah, WI
- 200 W Photovoltaic Installation at University of Wisconsin, Milwaukee
- 200 kW Biogas Genset at Maple Leaf Farms, Franksville, WI
- 60 kW Combined Heat and Power Microturbine at Lake Tower, Milwaukee, WI
- 70 kW Microturbine at Industrial Facility, Mequon, WI (sited only)



Local Code Issues

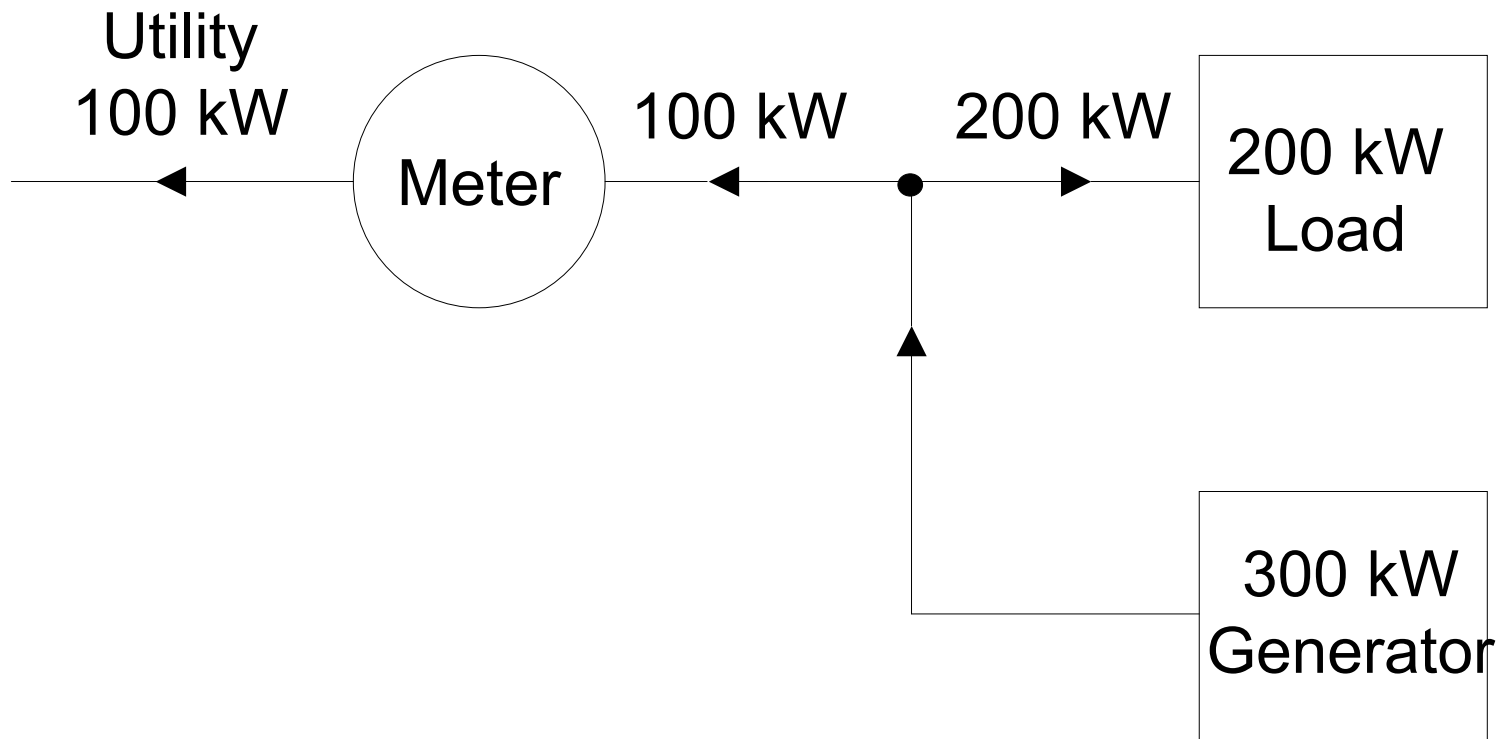
4

- We Experienced a Wide Variation In Local Code Issues
 - Brookfield - Residential Area - Noise Concerns
 - Mequon - Industrial Area
 - Neenah - Industrial Area



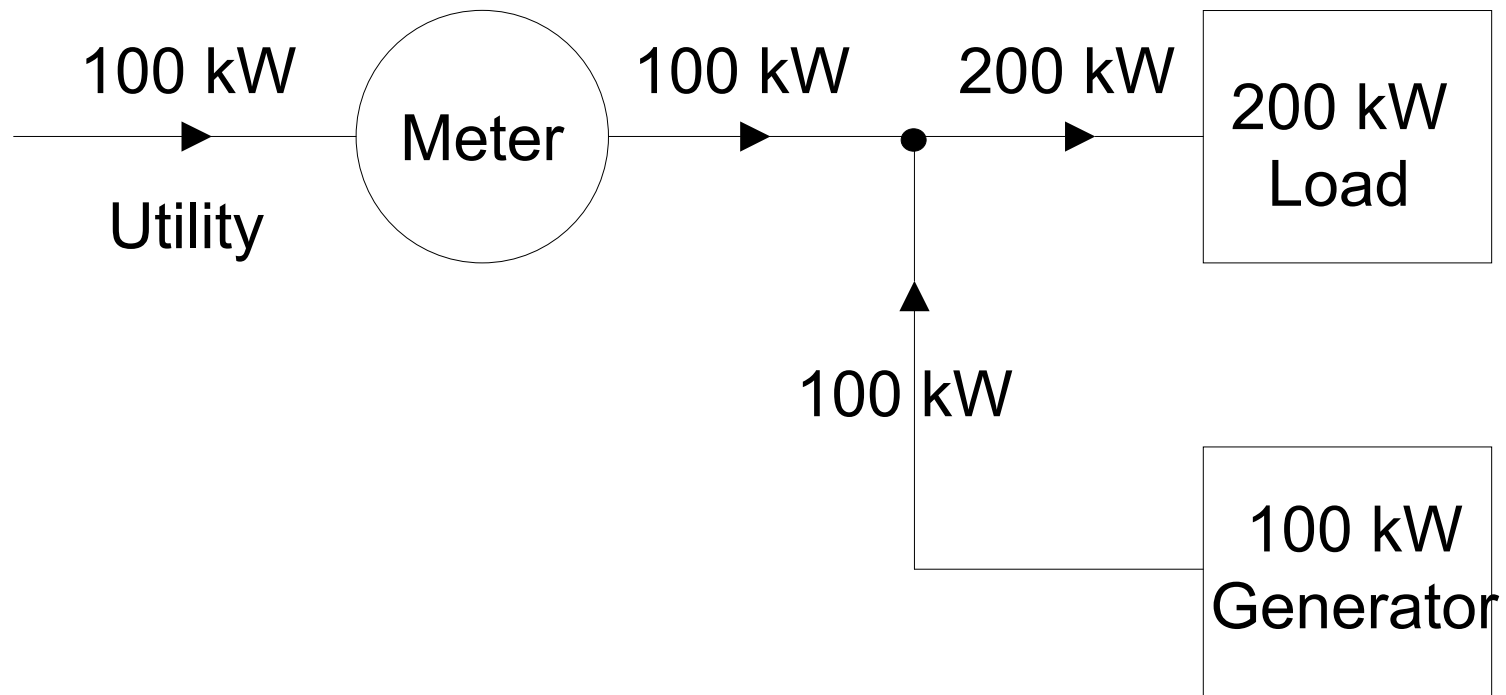
Export Case

5



Non-Export Case

6



Parallel Generation

7

- Non Exporting Parallel Generation Will Affect The Utility Distribution System:
 - Frequency Variation
 - Voltage Variation
 - Transients, etc.
- Analogous to Operating Your Laptop or CD Player On An Airplane



Interconnection Activities

8

- Support State Efforts to Develop Standard DG Interconnection Rules - Due in July 2003
- Developed Interconnection Procedures, Processes, and Customer Education Materials
- Monitor and Participate in Federal Activities on Interconnection



DG Interconnection Materials

9

- We Energies Folder:
 - DG Primer and Contact Information
 - Technical Requirements for the Interconnection of Customer Owned Generation 8/1/02
 - Customer Owned Generation Systems (COGS) Tariffs
- DG Demo Project Descriptions



Questions?

Comments?

we energies



And Now a Word About The Lake Tower - CHP Tour

**From Andy Hilgendorf
City of Milwaukee**

we energies



we energies
today, tomorrow, together.



www.we-energies.com